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Dahlkild, Nan

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# **Nordic Library Architecture in the Twentieth Century: The Emergence of the Scandinavian Style**

Nan Dahlkild, Royal School of Library and Information Science, Copenhagen

The aim of this paper is to investigate the emergence of the Scandinavian Style of library buildings in the twentieth century in relation to the creation of the Nordic welfare state, the cultural politics of the welfare state and the popular movements of enlightenment and library development. Both social, cultural and architectural theories will be applied.

The main thesis is that architecture and design of Scandinavian library buildings are reflecting “genius loci” such as the cultural politics of democratisation and enlightenment and Scandinavian architectural tradition and development: That you can “read” the libraries as documents of the intentions behind them, both the aesthetics and the practical planning of the architecture and design, the division of space, the decoration and the presentation of books and other materials. Sources of documentation will be the buildings themselves as well as the professional discourses in debates, architectural competitions, journals and textbooks, both amongst architects and librarians.

## **Background**

The development of the modern public library system in the Nordic countries took its offspring in the beginning of the 20th century. In Sweden, the Dickson Library was erected in Gothenburg in 1897 based on the inspiration from the American public libraries with their open shelves. Similarly, a series of spectacular public library buildings were constructed in Norway during the first decades of the century such as the Grünerløkken branch of the Deichman Library in Oslo from 1914 and the Bergen Library from 1917. In Denmark, a joint museum and library building was opened in Køge in 1889 and when this joint accommodation had become too small, the first stand-alone or self-contained Danish public library building was erected 1918-19. These libraries were typically built in historical styles, often with inspiration from H.H. Richardsons libraries in neo-medieval style, that were associated with the Anglo-American library movement.

The libraries from this period, often located in rented apartments, could be characterized as “the library as a home,” with solid dark furnishings, often national romantic decorations and literary pictures. Also, the ideology of the library movement at the start of the twentieth century emphasized the library’s relation to local communities and people’s homes.

Of special interest in an international context is the unique working model library at the National Exhibition in Aarhus, from 1909. It was intended to be a model library for future library buildings, interiors and materials. An important principle expressed in the model library was open access. The library was built as part of a community building, to serve as a cultural centre for an ideal small Danish town. Good reading, good design and good architecture were consciously promoted at the same time in the same building, as part of a greater enlightenment project.

In the first decades of the twentieth century Scandinavian library politics were characterized by “library spirit” of the both the professional pioneers, the patrons and the popular movements.

Library ideas and library buildings were influenced by the Anglo-American ideals, especially the ideas of open access as well as the "temples of knowledge" of the Carnegie Library tradition, both as metropolitan libraries such as the main buildings of the Deichman Library in Oslo from 1922-33 and the Stockholm Main Library by Gunnar Asplund from 1924-1928 and as smaller and provincial libraries such as the public library of Hjørring, Denmark from 1927.

The typical public library from that period was characterized by a classicistic sobriety and a symmetric ground-plan like a "butterfly," where a monumental entrance hall and the adult lending department are located on the central axis as a "body" with adult reading room and children's library as "wings" on each of the sides. Typical was also the panoptic view from the central desk.

Higher priority was given to the existence of a modern and goal-directed book-lending department at the expense of a library space for visitors' social and more unstructured activities.

Professionalization grew, and the organization of libraries became more rational and standardized, but cultural and educational politics still stressed the importance of voluntary evening courses and study circles. In many libraries, there were special rooms for study circles, and librarians were expected to play an active role in these activities.

In the thirties a new Scandinavian library style emerged, reflecting the growth of the welfare state, the cultural movements and the modern architecture of the time. It was less monumental and more oriented towards ordinary everyday life than the temples of knowledge. The hallmark of the Scandinavian model was its combination of modernistic experiment with traditional library design. The most advanced and modern example of this new style was the library in the former Finnish town Viipuri/Viborg, designed by the Finnish architect Alvar Aalto. His first project in Viipuri, from 1927, was strongly influenced by the Stockholm Library by Gunnar Asplund, but when the building was completed in 1935 it was a bright example of the new white modernism. In 1939 Nyborg Public Library in Denmark combined tradition and modernity, both in architecture, design and organization.

After the Second World War the Scandinavian style with open and informal library space became an international ideal, but the other hand also Scandinavian library buildings were influenced by the international ideas of flexibility, functionality and modularity. Around the millennium both the Scandinavian welfare state and the Scandinavian library model are challenged by the social and technological development.

## Open access

The introduction of "open shelves" or "open access" around the turn of the last century was an important and much-discussed prerequisite for the development of modern public libraries. Open access heralded a whole new form of library space, but gave rise to great debate and were usually introduced in several phases. The development was almost synchronous in North America, England and Scandinavia.

Advocates of the new system emphasised that it was a democratic, public-minded initiative that allowed borrowers to choose books on a more informed basis. Opponents put forward a great many arguments: there was a greater risk of theft or of books being misplaced and becoming impossible to re-locate. They also criticised lazy librarians who were bound to stay at their desks and not bother

to help borrowers. There was a danger indeed that librarians would become redundant and perhaps be paid lower wages. There was a debate as to whether open shelves were more educational, since they allowed borrowers to orient themselves (though only among books that were not lent out) or whether, on the contrary, the closed stacks system was better, because it forced borrowers to search systematically in the catalogues. In his article "The Open Access Revolution in British Libraries: Consumer Democracy or Controlling Discourse?" the English library historian Alistair Black has sought to put in perspective the international debate on open shelves. He links free access to books with free consumer choice in the department stores of the period, and, drawing on the ideas of the French philosopher Michel Foucault, sees the panoptic arrangement of the library as an expression of its disciplinary and controlling role. (Black, 1994).

In Scandinavia open access were already being recommended by around 1900. In his introduction to libraries, *Folkebogssamlinger* (1900), the Danish library pioneer A.S. Steenberg already took a positive view of the open shelf system on democratic grounds: "In recent years an entirely new form of library has been established: the "open access" library. It has enthusiastic advocates and enthusiastic opponents. The grounds for it lie in the notion that when a borrower is to decide whether he needs a book or cares to borrow it, he need merely pick the book up and examine it. Thus one should give him access to the shelves and let him choose his book from among them all." (Steenberg, 1900, 25-26).

In *Bibliotekbygninger* (Library Buildings) from 1919, an introduction to the building of new libraries, the Norwegian librarian Arne Arnesen likewise advocated the system of open shelves: "The advantages of the system are clear to see. The public feel quite at home in the library, they come into direct contact with the books and develop their knowledge of them; their attention is drawn to a text that they would otherwise have passed indifferently in the catalogue... Open shelves (for adults) do not therefore presuppose any strict or close control." (Arnesen, 1919, 21-22). Arnesen became leader of the Deichman Library in Oslo in the period, where the new library building was erected.

This discussion was accompanied by a number of compromises between open and closed shelves, usually in the form of gates at the counter or shelves protected by wire netting. Special book "cages" with wire netting were developed, that allowed the borrowers to see the backs of the books displayed with the relevant number or short text. In the Deichman Library in Oslo a special "cage" was set up in the youth department, so that children and young people could point out to the librarian the books stacked behind the net. (Ringdal, 1985, 126). The Town Hall library in Copenhagen (built 1905) with shelves protected by netting offers a good example of the transitional methods adopted at the time. The introduction of open shelves was accompanied by a panoptic organisation of the library, in which the librarian was placed at a counter at the centre of a fan-shaped arrangement of bookshelves. This enabled him to survey the entire room so that he could assist borrowers in their searches and counter any problems with misplaced books or theft. The panoptic arrangement of libraries culminated in the 1920s.

To serve the growing library readership efficiently a modern counter was introduced that became the centrepiece of the panoptic arrangement of furniture. This type of counter incorporated a number of practical functions relating to lending and correspondence and could be used in many types of premises, serving the borrowers as they passed to and from the open shelves. Gradually it became necessary to extend the library's initially rather small office area, and some of the pressure on the many functions of the counter was relieved.

Open access was thus an important part of the creation of a new library space in which the borrowers could walk freely about the premises, browse among the shelves and chat with one another. They could find and read the books they were looking for, but they could also stumble on something unexpected. Borrowers were no longer bound to present their wish lists to a librarian behind a closed counter. Borrowing was simplified by replacing long forms with the simple method of stamping a loan card. These possibilities were important aspects of a new type of library and a new library identity, that the room itself both expressed and helped to create. This new openness would later be related to the open, floating and transparent space of modern architecture, and it also became a part of the Scandinavian Style.

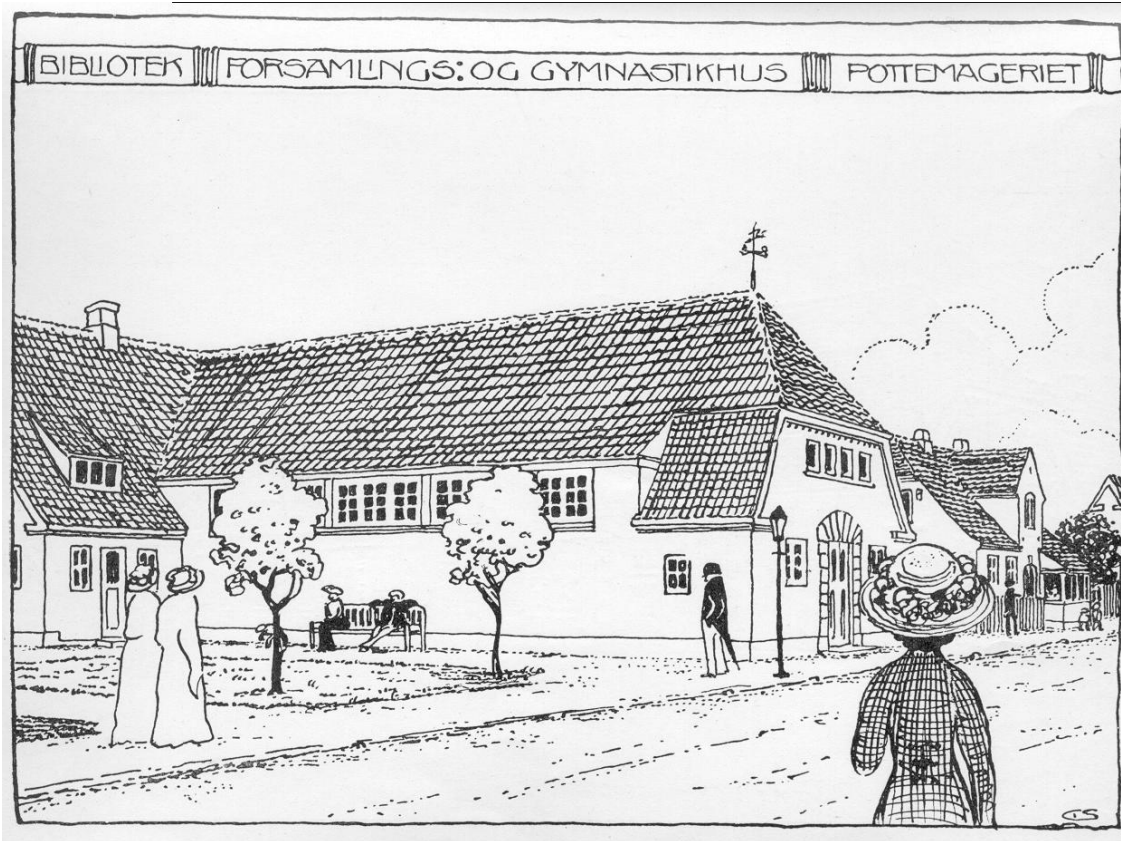


Fig. 1. Drawing of the model library at the main street of the ideal small town exhibition in 1909.

### The Model Library at the 1909 National Exhibition in Århus

An important landmark in the introduction of open access in Denmark was the model public library, erected as part of the “railway town” or “village” (Stationsby) exhibition at the National Exhibition (Landsudstilling) in Århus in 1909. The library was built in conjunction with a village hall and designed to serve as a working model library in the ideal model town. As such it was part of a joint architectural and cultural initiative aimed at inspiring improvements in the Nordic architectural tradition, the establishment of new libraries and the reading of good books. The building of an exhibition library on a 1:1 scale was a unique and original project not only in Denmark, but also in the international context (Dahlkild, 2002).

The library was built together with a village hall or community meeting place, so that the use of a popular book collection (as the public library was called at that time), reading of newspapers, reading aloud sessions, song and physical exercises could be offered as activities in this “center of culture” as it was called in a contemporary outline of this early multi-purpose community library. With its small garden, the building was centrally situated in the main street of the ideal town. It was laid out as an L-shaped building with the library located in the one wing and gym and meeting room in the other. With its yellow walls, white windows with bars and cornices and a red tiled roof, it expressed the ideals of a more honest and sober architecture based on the Danish craftsmanship tradition.

Serving as architect for this pioneering project, Johannes Magdahl Nielsen drew both the building and its furniture himself. A contemporary drawing showed the library, the village hall and the pottery of the exhibition together, thus reflecting the relationship between manual and intellectual work, between soul and body. This connection would smoothly match the Danish folk high school movement, inspired by the philosopher and poet N.F.S. Grundtvig. The building itself could be seen as a refined version of a small Danish farmhouse.

*Forsamlingsbygning.*

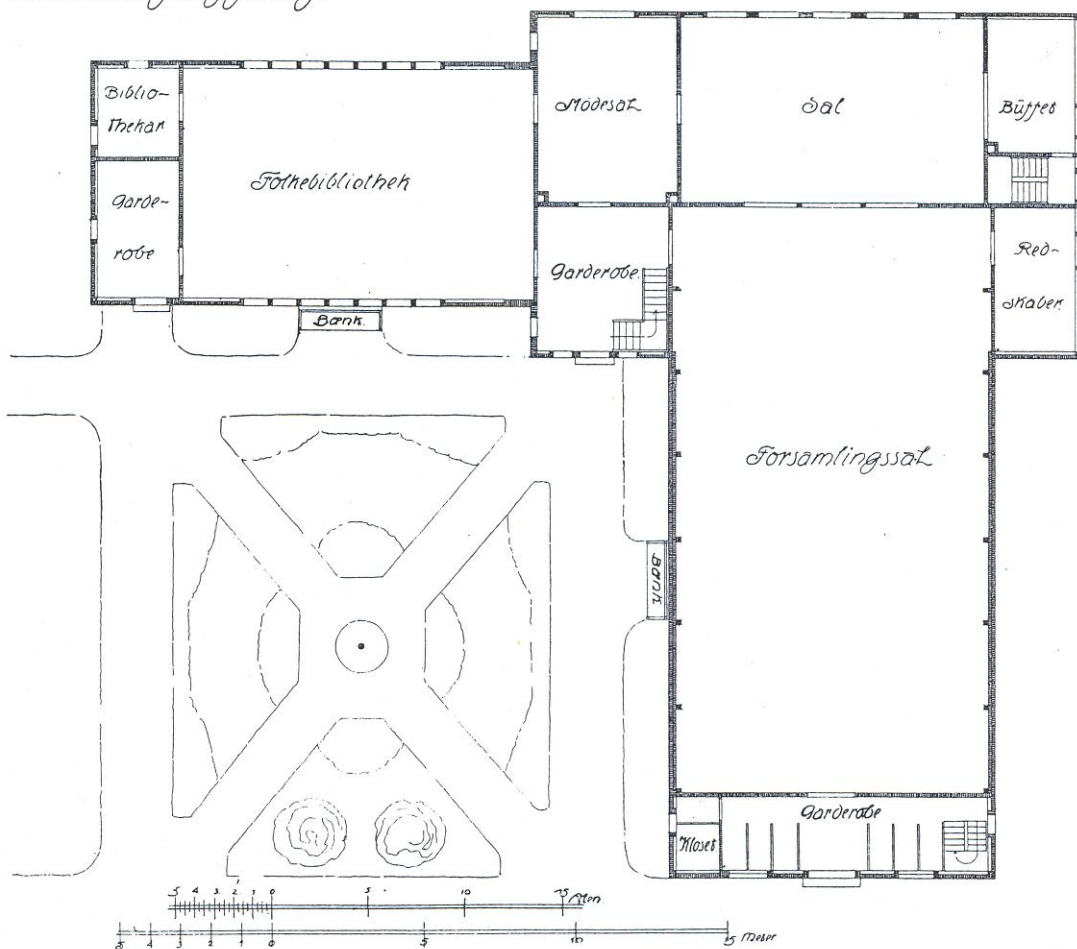


Fig. 2. Plan of the model library and community center.

The State and University Library in Århus made books and staff available during the exhibition period. A small green leaflet on “The Public Library of the Railway Town” authored by the Director of the State and University Library of that time, Vilhelm Grundtvig, provided a detailed treatment of the design and philosophy of the model library. With its detailed library specifics, price information and many illustrations this leaflet served as a call to visitors to the exhibition to establish a similar library. In this context, it is important to mention that Grundtvig placed great emphasis on the quality of the design and decoration of the library.

Grundtvig started by emphasizing that the library had “open shelves” so that “anyone can select and pick out what he wants.” (Grundtvig, 1909, 3). It was a one-room library with five tables including a special children’s table and a worktable for the librarian. Tables, chairs and bookcases were made from stained pinewood. Walls and ceilings were painted in light, yellowish tones. Pictures of Danish male and female writers, “literary places” and maps were hanging on the walls. On the tables and on the large bookcase there were pots and vases from the railway town’s pottery.

Grundtvig pointed out that “a library and a reading room are not only a room for books but their prime purpose is to serve as a place where people should look for instruction, entertainment or rest after having completed their work.” Hence, it was important that both premises and furniture were kept in “plain, pure and harmonious lines and colors” ... “The opportunity of creating a cosy and domestic impression by means of pictures and other (good) artworks, flowers and the like should be welcomed.” Grundtvig, 1909, 8).

The visitors to the exhibition were allowed to check out books and bring them into the garden after having approached the employee available throughout the daily opening hours from 10 a.m. to 7 p.m. About 70,000 visitors were recorded in the library including some 21,000 as readers. The number of visitors to the library peaked at 2,750 on 18<sup>th</sup> July. Another activity taking place within the building was the first national Danish library meeting with several pioneering lectures being held.

Thus, situated in this idealized railway town, built together with the community center, the model library’s architecture, lay-out, and design and the model book collection, formed part of a total joint campaign for democratisation of both architecture and reading. For follow-up on the exhibition library, reference can be made to the layout of Vejen Public Library from 1916.

The library as a temple of knowledge: The Deichman Library in Oslo and The Stockholm City Library

With the open shelf system, new library technology and the standardisation of library routines for cataloguing, classifying and lending books, an international model was created that had a crucial influence on the development of the physical design of public libraries in the first half of the 20<sup>th</sup> century. An important aspect of this library model was the almost standard division into an adults’ lending library, a reading room and a children’s lending library/reading room.

Both in terms of architecture and interior design the many Carnegie Libraries – often quite small, yet monumental and temple-like in appearance – became highly influential internationally, offering model planning solutions for libraries of various types and sizes. Andrew Carnegie’s secretary James Bertram drew up a set of guidelines in his *Notes on the Erection of Library Buildings*. Here he

set out six practical planning solutions for libraries of various sizes, which with suitable advice could be freely adapted by local architects to meet local needs. A feature common to all these plans was a flight of steps at the centre of the building, leading up to an elevated ground floor with a reading room on one side, an adult library with a centrally placed counter in the middle, and a children's library on the other side. Together, the steps and columns emphasised the loftiness of knowledge.

The ideal form of the classical "temple of knowledge", "temple of enlightenment" or "temple of books" involved a symmetrical ground plan, shaped like a "butterfly" with the entrance and the adult lending library representing the body in the middle axis, and the adult reading room and children's library forming the "wings". The form could be compact like a basilica with a central nave, with the wings folded into the body, or the wings could be spread out to form a T-shape. Often the middle axis served to connect the library building with its surroundings. This classical monumentality was further underscored by the high steps that led up to the entrance, often with columns. The symmetrical design continued into the front hall and on into the adult lending library, culminating in the counter or librarian's desk, which commanded a view of the whole room. The main card catalogue with its record of the library's holdings was likewise placed on the middle axis, and frequently a clock embellished the centre of the end wall as well; these features symbolised order – in both time and space – in the library's comprehensive collections. The ground plan of the building, its interior design and furnishings and the arrangement of the books all served to express objectivity, stability and solidity.

The "trinity" formed by the division into adult lending library, reading room and children's library became the archetypal plan of the temple of knowledge. From the outside the ground plan and the building itself could be read as forming a secularised temple of enlightenment and the interior a secularised basilica, based on the model of the mediaeval church with a nave and aisles. Thus the temple of knowledge was at the same time sacred and secular, both in terms of architecture and interior design. Moreover, the three types of library rooms were distinct in terms of function, codes of behaviour and the identity of the librarians who served in them. The distinction between the three types, however, was stronger in Europe than in America.

The adult lending library was the central room of the public library. It usually took the form of a symmetrical gallery with high windows or top lighting. This arrangement emphasised the loftiness of the room and the many meanings of light. The reading room was the place for enlightenment, concentration and reflection, and often included special rooms for study. It was also associated with reference work, which in its modern form was an important part of the identity of the library profession. With rules enjoining users to converse in low voices and move around quietly it was also the room with the most regulated behaviour. It contained a collection of practical, informative reference books designed for purposeful study. Newspapers could also be read here if there was no special newspaper room. Finally, the children's library was oriented towards the reading, education and enlightenment of the coming generation. Initially, libraries simply provided special shelves with books for children. Later, special children's rooms were introduced, which in larger libraries were further divided into a lending department and a reading room. Although the children's library was the liveliest and freest room, it was furnished in the same style as the adult library, albeit on a smaller scale. However, the children's library was often specially decorated and in some cases equipped with a story-telling space for reading aloud.



Among the qualities of the temples of knowledge were their recognisability, regularity, clear functional division, spaciousness and airy premises with good high ceilings. It is somewhat paradoxical, however, that the public library as a supremely democratic institution should become associated with a relatively closed and pompous style of building.

The Deichman Library in Oslo was built over a long period from 1922 to 1933. With its classisistic rows of columns and almost symmetrical plan it was inspired by the Public Library of Indianapolis. The monumental character as a temple of knowledge was stressed by its position as the Acropolis of Oslo, high above the old parts of the city. The lofty lending room had galleries and columns.

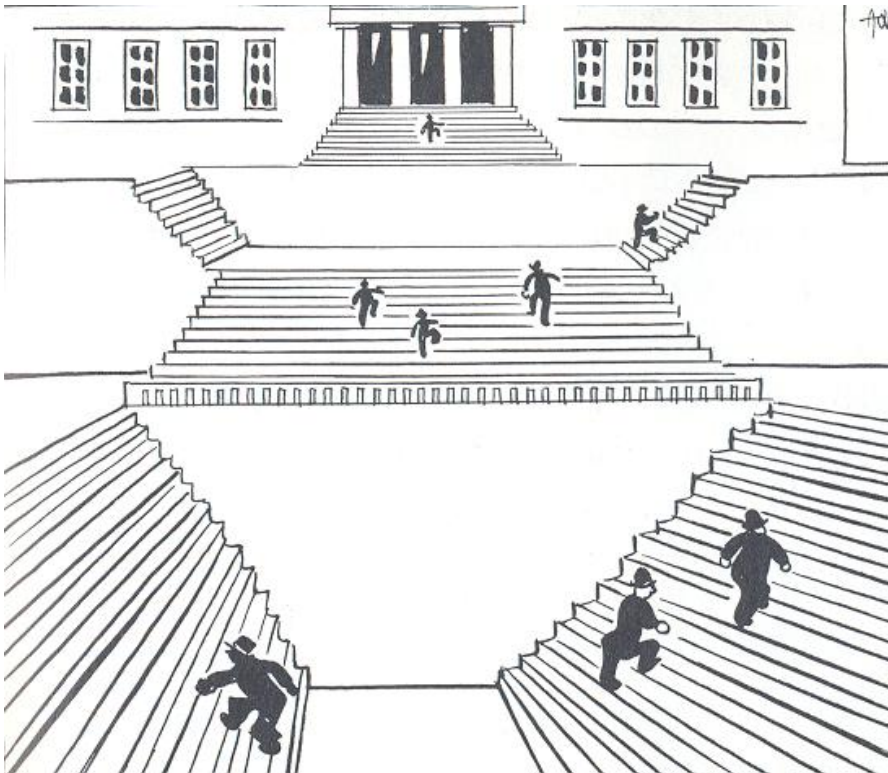


Fig. 3. Contemporary caricature of the many steps leading to the Deichman Library in the journal *Nationen*.

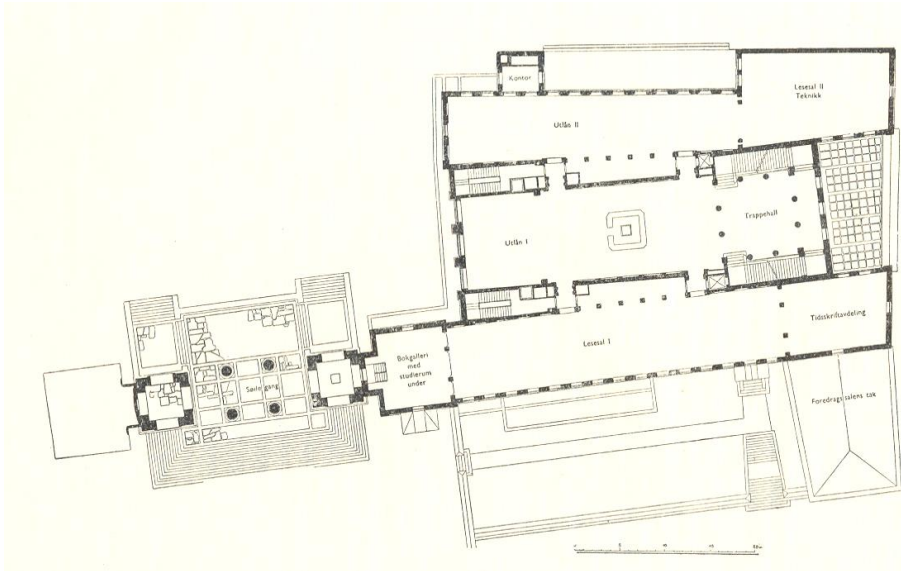


Fig. 4. Plan of the Deichman Library with rows of columns.

The Stockholm City Library offers a good example of the way in which the temple of knowledge was architectonically refined. It was designed by the Swedish architect Gunnar Asplund and built between 1924 and 1928 (Fröberg, 1998, 199-203; Holmdal, 1943, 43-46). The west wing was completed in 1932. Following a research visit to the USA, where he visited the big public libraries in Indianapolis and Detroit, Asplund drew up several possible plans that reflected the movement from classicism to modernism. He was inspired by the modern functions of the American libraries, but chose to give them more simple aesthetic expression.

The simple geometric ground plan consisted of a circle inscribed in a quadrangle, corresponding to the central cylindrical building which rises above the four wings. The monumentality of this cylinder corresponded to the cupola of the British Library and the cupola the Library of Congress in Washington. It is similar to the ground plan of the British Library's large reading room in the courtyard of the British Museum, but it is characteristic that whereas the reading room was the central room in the great English library, built in the mid 19th century, the adult lending library was the central room in Stockholm's modern public library. In Asplund's first proposal the library is crowned, like the British Library, by a dome. The west wing from 1932 differs from the rest of the library, both in architecture and design. It was added after the Stockholm Exhibition in 1930, where the modern style made its break through in Sweden, and Asplund moved from neoclassicism to modernism.

The building has four virtually identical facades. From the entrance hall one ascends a long, narrow "scala regia" which leads like a dark passage to the great, light lending room, formed as a rotunda with two circular book galleries containing Swedish and international fiction, poetry and drama. Non-fiction, which was considered the highest form of educational literature, was placed in two halls in the side wings; here you could find reference books and borrow scholarly or technical works on different subjects. The division of books into different subject areas, and the amalgamation of reference and lending collections, were novelties in librarianship. The children's library was equipped with a "story corner" for reading aloud, decorated with motifs such as "The Sandman".

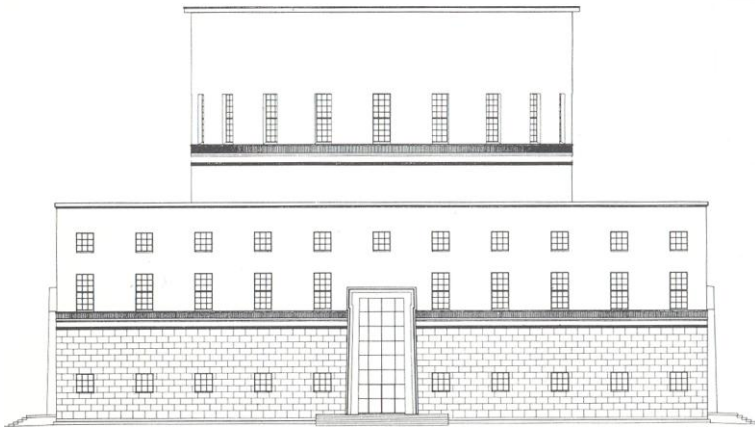


Fig. 5. Stockholm City Library from 1928.

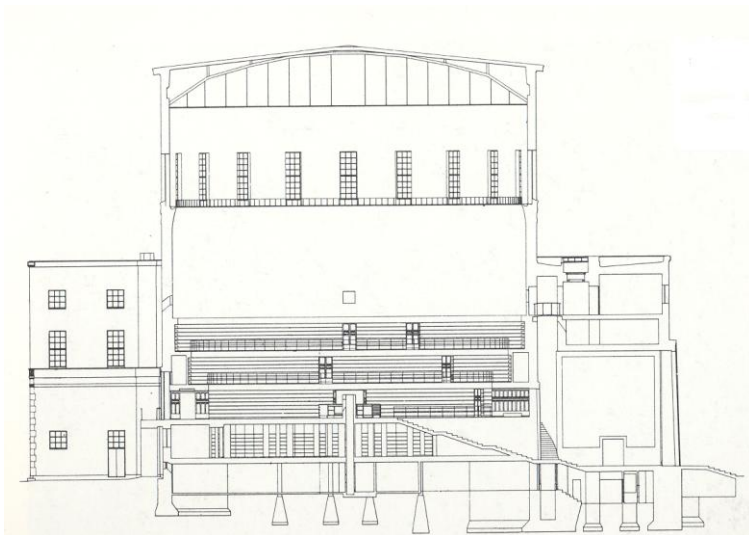


Fig. 6. Stockholm City library from 1928.

### The Scandinavian Style: Viipuri and Nyborg Public Libraries

International modernism was introduced in library architecture by Alvar Aalto's library in Viipuri/Viborg in Finland, which at that time was Finland's second largest city (Fröberg, 1998, 202-207; Weston, 1995, 62-69). Aalto's first draft was inspired by Asplund's City Library in Stockholm. The building consisted of white cubic shapes with a large entrance in glass, but also had inner organic features that anticipated Aalto's later buildings. The library was set in a park and Aalto envisaged the white walls being brought alive both in summer and winter by the shadows of the park's trees.

The library was divided into split-level blocks and plateaus with various functions. The entrance with its large glass window jutted out, and inside the building the stairs to the left floated in a transparent room between two glass walls, between interior and exterior. From the entrance one

went up to the lending library, where the counter stood as the culminating point, modelled on the Finnish landscape, at the end of a symmetrical staircase. The sunken part of the lending library offered a new interpretation of the classic gallery library. Light wood was used extensively, and the wooden ceiling in the lecture hall was organically folded. The idea was to distribute the sound in the long auditorium and thus make the room more democratic, with everyone being able to hear everyone else.

Aalto later designed several libraries both inside and outside Finland.

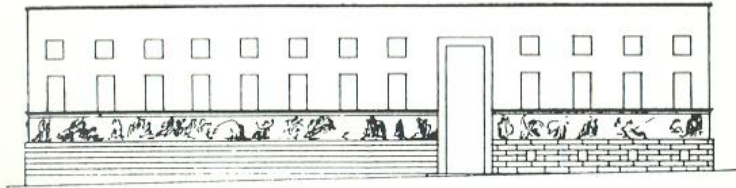


Fig. 7. Viipuri Public Library. Project from 1927.

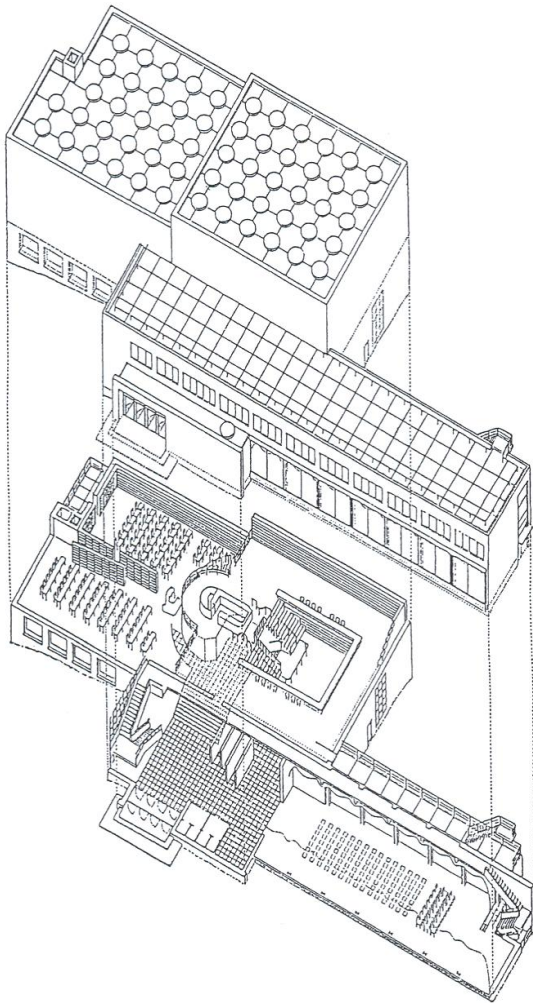


Fig. 8. Viipuri Public library from 1935.

In Denmark, a new style of library architecture was introduced in the Nyborg Public Library in 1939. It was designed by Flemming Lassen and Erik Møller, who won an architectural competition in 1935. Both Lassen and Møller worked together with the architect and designer Arne Jacobsen on other projects. The interior of the library was designed in collaboration with Hans J. Wegner. With simple forms in red brick architecture, an entrance through a glass loggia and a unique site directly adjacent to the canals around the Castle of Nyborg, the library represented both tradition and modernity.

The inner space was light and open, the interior panels and furniture were made of sycamore wood, and all furniture and lightning were designed especially for the library. The free-standing shelves projected out from the walls, allowing a view through the windows to the town's houses and canals. The lightness and transparency of the room was underscored by the backless bookshelves that, suspended between white-painted metal pillars, appeared to be almost floating. This open, user-friendly design brought the library closer to everyday life and the ordinary world. From the rooms of the library you could look directly into the surrounding park or into the canals. The library in Nyborg is a fine example of regional architecture, reflecting the *genius loci*. It was a breakthrough for a new Scandinavian Style in library architecture as an expression of the cultural politics of the emerging welfare state.

The general background was the economic, political and social conditions of the period, especially the cultural politics of democracy and enlightenment. Local patrons, such as the Sibbersen brothers and Mayor Hansen, provided the funds for the expensive building. The unique situation was the background of an architectural competition, with emphasis on the context of nature and existing buildings. The winning project integrated these conditions with the architecture of the "functional tradition". The architects Flemming Lassen and Erik Møller combined tradition and modernity with their personal expression and originality, in collaboration with Hans J. Wegner.

The Nyborg Public Library had a double architectural identity: with its asymmetries, its free utilization of space and its large glass fronts, it was the most modernistic Danish library of that period. But, at the same time, with its wooden interiors and modernized versions of traditional furniture, it referred back to the first public libraries of the period, including the model library at the National Exhibition in 1909. Analysed from the perspective of cultural policy, it represented an orientation towards a new democratic culture, with both traditional and modern elements.

The library opened to the public on September 18<sup>th</sup> 1939. The reception in both local newspapers and professional journals was generally very positive. However, there was local criticism that the building was not monumental enough and looked like a barn. Local young people and students from The Royal School liked the building, and in Danish architectural history it has become an icon of the "functional tradition" and the cultural optimism of its time.

The Nyborg Public Library is often compared with Alvar Aalto's library building in Viipuri, and Aalto's library in Viipuri is often compared with Gunnar Asplund's City Library in Stockholm. These three libraries are very different. The main library in Stockholm is a refined version of the temple of knowledge, with its symmetry, stairways and rotunda. The library in Viipuri is a clear expression of modernism and functional philosophy, with the special touch of Aalto's organic design and wooden materials. The public library in Nyborg combines tradition and modernity with traditional materials, in the architectural language of the "functional tradition", as well as with a great sense of adaptation to user needs.



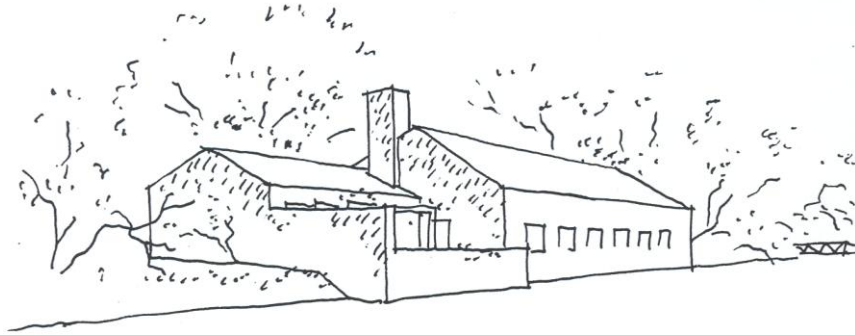


Fig. 9. Draft for Nyborg Public Library.

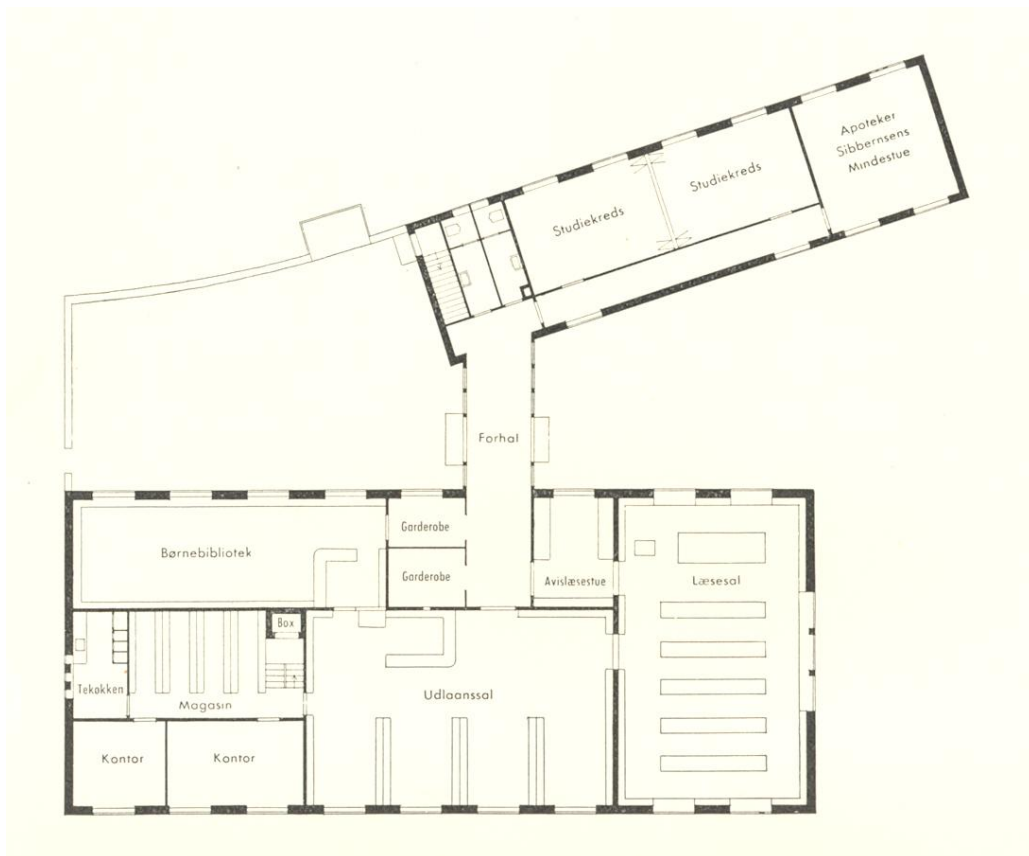


Fig. 10. Plan for Nyborg Public Library from 1939.

In the introduction to the Nordic anthology *Nordisk funktionalism*, the Swedish architectural historian Gunilla Lundahl compared Aalto's modernistic library building in Finland with the Nyborg Public Library as part of the "functional tradition" in Denmark. (Lundahl, 1980) She examined the two buildings as examples of different expressions of modernism in the public space. Both buildings are complex: "How different the ideas of modernism could be adapted is obvious in a comparison of the little public library in Nyborg by Flemming Lassen and Erik Møller from the late thirties and Aalto's library in Viborg, first designed in 1927 and built in 1930-35. In Aalto's building, the connected building volumes are organised masterly, there are unexpected rooms, the experience of light is varied in relation to the functions of the different rooms, and acoustics, circulation of air and isolation of sound have been studied carefully. The materials are glass, steel and white plaster, but also various wooden materials on the walls and in the furniture." (Lundahl, 1980, 9). Whereas the library in Viborg is characterized by its modern materials and functions, the library in Nyborg is characterized by its humanism: "The public library in Nyborg rests unconcerned in the ultimately cultivated landscape, with canals, well-tended lawns and the various forms of trees of the English landscape garden. A flat roof is only found over the glass loggia, which connects two brick buildings. The simplicity, joy of materials, quietness and unpretentiousness illustrate very well the perennial humanism of Denmark's "functional tradition". (Lundahl, 1980, 9).

This open, user-friendly architecture and design brought the library closer to everyday life. With its accommodating form it was a break with the monumental tradition of the time and became an example of a new type of library architecture where easy access, freedom of movement, spacious rooms and the use of light wooden furniture were expressions of democratisation and public enlightenment. The Scandinavian model with its open, informal and familiar-looking library buildings, often of high architectonic quality, became inspiration for library architecture in the following decades.

### Flexibility, functionality and modularity

After the Second World War library buildings expanded as part of the growing welfare state, influenced by the ideas of modern architecture and rational planning of space and functions. Modernism influenced library architecture in the direction of the sober and down-to-earth: "No columns, no pillars, no arches, no ornament, no contrived monumentality" as the architectural historian Nikolaus Pevsner put it. After the war there was a movement towards library environments that were "light, spacious and informal". Library space became even more open and transparent. In urban planning these modern libraries became part of the new cultural centres of the suburban landscape.

An important aspect of modernism in library architecture, but also a consequence of a new rationality in library planning, was the development of modular systems with structural columns. These systems made massive load-bearing walls unnecessary, and at the same time they made flexible interior functions and furnishings possible. Walls were temporal and could be removed according to changing needs and functions. The idea of the module was two-fold: to ensure that the bookshelves could be located anywhere in the library (providing flexibility) and to position the structural columns so they would not interfere with the spacing of book shelves (providing functionality). The keywords of library planning in the decades after the war became flexibility, functionality and modularity.

Much attention was paid to standards of space and furnishing. Needs of space for staff and users were defined. The ideals of library service and design were to create inviting and pleasant as well as efficient interiors, combined with well-organized and co-ordinated architectural elements. While the ideals were very attractive and progressive, the buildings themselves - with consistent ceiling heights, large floor-plates, and artificial lighting - tended to become monotonous. Rectangular buildings and furnishings became typical with the book as “the real library module”.

International examples of the modular library in glass and steel are the The Martin Luther King Jr. Memorial Library in Washington D.C., designed by Ludwig Mies van der Rohe and completed in 1972, and the Amerika Gedenk Bibliothek in Berlin from 1954, that became very influential in relation to the Scandinavian development.

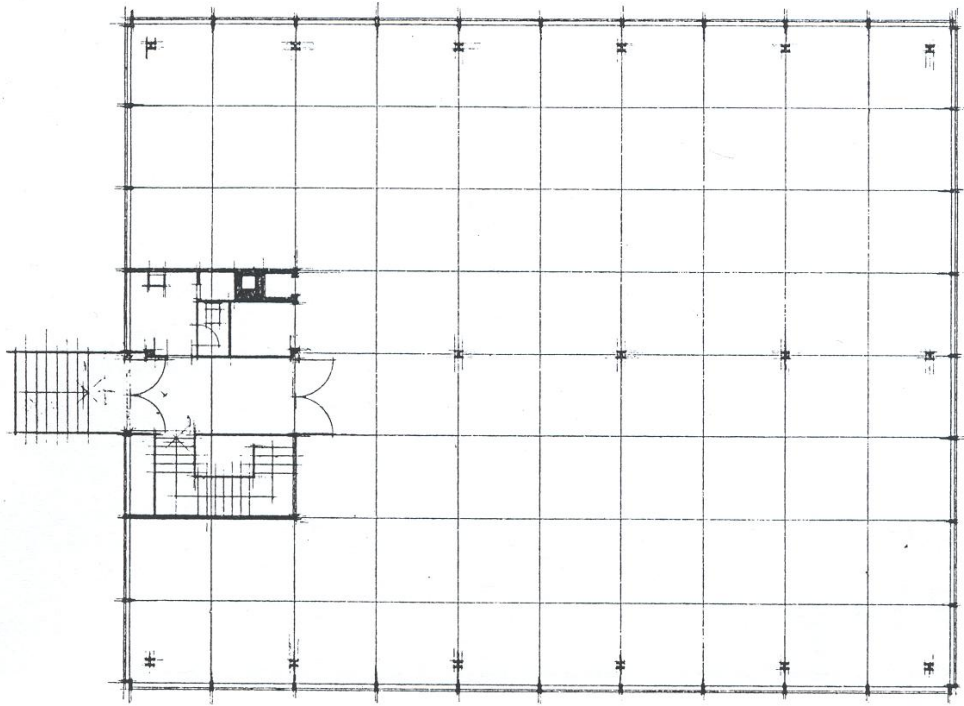


Fig. 11. Plan for Hørsholm public Library from 1956.



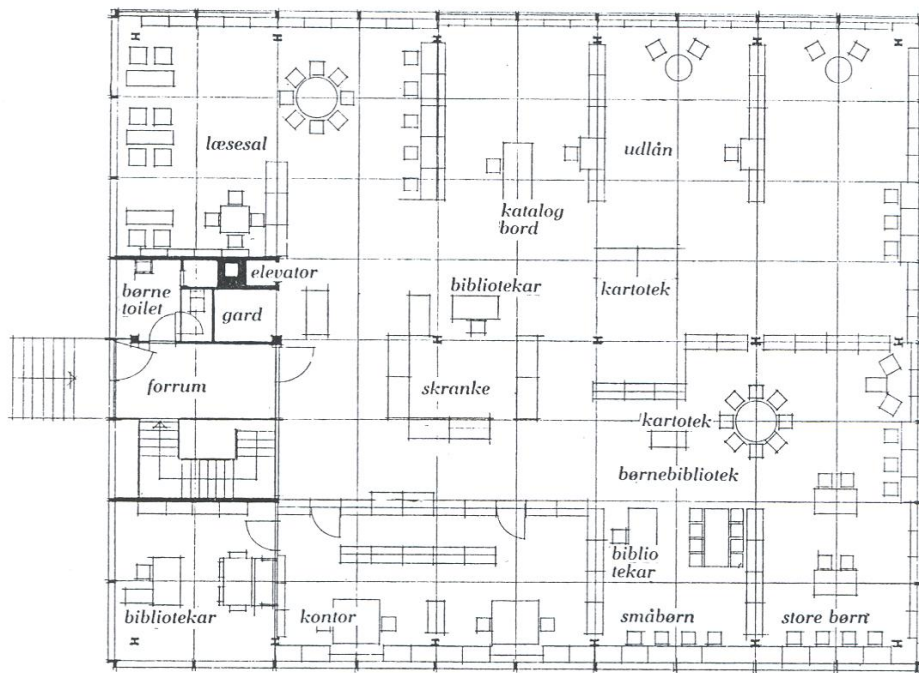


Fig. 12. Plan with furniture for Hørsholm public Library from 1956.

The Public Library of Hørsholm, a green suburb north of Copenhagen, from 1956 is a fine example of the Scandinavian Style after the war, strongly influenced by the ideas of flexibility, functionality and modularity, that were also characteristic of the international development. Functions could be changed and shelves and furniture could be moved. Users should be tempted to move around in the open space. They might even find something unexpected among the many possibilities of the library. Much attention was paid to the furniture, design and colours. The transparency of the building should be attractive to users and connect the library with its surrounding community. Service became a keyword more than classical enlightenment.

### Spectacular experience libraries as icons and branding

Around the turn of the millennium new tendencies in library architecture and design have occurred. The development of new media and digital information technology has challenged the traditional library with different visions of “the library without walls”, but it has not weakened, but apparently heightened international interest in the library as a physical space.

Especially a series of grand metropolitan libraries has been built around the millennium. Almost as “icons” these “new downtown libraries” as well as museums and other spectacular buildings have become a parameter in the competition between great cities of branding themselves and attracting the creative and wealthy classes. However, the intentions are also to revitalize the inner districts of the metropolitan areas. The post-modern architectural expressions, interiors, media collections and organisation of these highly visible building have uending possibilities. Typically libraries develop as multiuse public spaces, where collections of books and other materials are important, but in

connexion with educational, cultural and social activities. Often libraries are defined as “third places” in society between home and work. In some of these initiatives the experience economy plays an important role. In other contexts the significance of the library as a place of retreat and reflexion is emphasized. The concept of “open access” and “open space” has thus become even more important in library architecture.

Whereas the decades of modular libraries were dominated by ideals of systematic planning, also for the future, the millennium period is characterized by rapidly changing functions and experiments. Internationally the architectural styles go from classical symmetrical buildings with columns and decoration, almost like the historical Carnegie libraries, such as the new libraries in Chicago and Nashville, to the deconstructed colosseum of the library in Vancouver and the ice pack of glass and steel, that marks the library in Seattle. Especially the new public library of Seattle from 2004, designed by architect Rem Koolhaas of the Dutch firm OMA (Office for Metropolitan Architecture) has been discussed as example of the new iconic library architecture.

In Copenhagen “The Black Diamond” was built as an extension to The Royal Library as part of the creation of a new harbour promenade with several cultural activities and institutions. It was designed by the architects Schmidt, Hammer & Lassen and opened in 1999. The name refers to the sharp prismatic edges and its surface of black granite and glass, reflecting the water of the harbour. The black surface is contrasting the inner open spaces with reading rooms in light wooden materials in Scandinavian Style. From the wave-like balconies of the central foyer, that cuts into the building as a 24 meter high atrium, there is a panoramic view over the harbour. The seven floors of the building contain not only traditional library functions such as the four reading rooms, but also a concert hall, exhibition galleries, bookshop, café and restaurant. A small Jewish Museum, designed by Daniel Libeskind, also with light wooden walls, has been integrated in the old red brick library cathedral from 1906, designed by Hans J. Holm.

Other examples of Scandinavian metropolitan libraries are the new Library in Helsinki, the project for an expansion of the Stockholm Public library and the project for a new main library in Oslo. The architectural competitions of these projects have been very internationally oriented. Libraries in Tønsberg, Norway and Hjørring, Denmark are examples of transparency and experimental organization of space.

## Conclusion

The Scandinavian model with open, informal and familiar-looking library buildings, often of high architectonic quality, played a significant role in the library architecture, especially in the decades in the middle of the twentieth century. After the war there was a movement towards library environments that were “light, spacious and informal”, and in the international architectural literature the Scandinavian libraries, among others, were presented as models (Galvin & van Buren, 1959, 104-106). In an international survey of library architecture from the same period Michael Brawne described the Scandinavian contribution as follows: “A good deal of present day contribution originated in Scandinavia both as regards library services and library buildings. Both have held an important position there for a considerable period and there was a precedent for innovation ... But perhaps most important of all has been the Scandinavian contribution towards making libraries both important and every day places in the community and giving this notion an acceptable architectural expression.” (Brawne, 1970, 22).

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Address: Asst. Professor Nan Dahlkild, Ph.D.  
Royal School of Library and Information Science  
Birketinget 6  
DK-2300 Copenhagen S  
nd@db.dk